

DRAFT
CALFED Issue Paper
rev. 6/22/98

Issue statement: Assumptions regarding water use efficiency and water available for transfer.

Some stakeholders and agencies are concerned that the CALFED Program (especially the Water Use Efficiency Component Technical Appendix) currently reflects a limited assessment of potential benefits of water use efficiency.

Additionally, analysis of transfer potential appears to be based on a questionable calculation of water available for transfer.¹ This calculation may underestimate the extent to which water use efficiency measures can result in "supplies" available for transfer.

Action: The Management Team is asked to place immediate, higher priority on additional work efforts (including use of an expert panel) to improve analysis of potential benefits of water use efficiency measures.

Background: The Water Use Efficiency Component Technical Appendix, in its discussion of the potential for water use efficiency measures, appears to rely on a number of basic assumptions which skew the analysis. Examples of these assumptions are:

(1) Only changes in the amount of irrecoverable water ('new water') constitute an improvement in water "supply" that would be available for additional beneficial uses, including water transfers. Some critics have pointed out that this assumption does not consider that changes in user A's manner of use (water quality and/or timing improvements) could effectively 'salvage' water for subsequent reuse, including transfers.

(2) Failure to consider the significance of evaporation associated with current irrigation methods.²

(3) Recoverable water cannot be reallocated to other beneficial uses. (This assumption appears to underlie much of the analysis of the TA. See, for example, pages 1-4 to 1-8 and p. 4-1.) This position assumes existence of full, legitimate use of the water returned "downstream" or to groundwater supplies. However, some critics believe that there is need for better documentation of the types, timing, and quantities of water use/ reuse within a basin.

Also, this assumption, which reflects a strict application of the "no injury rule," overlooks circumstances such as downstream users of return flows who have no legal rights to the water and who are enjoying 'free' benefits. For example, analyses based on this assumption fail to distinguish between re-use of native (in-basin) water and imported water.³

As a practical matter, water managers contemplating making conservation investments to save and sell water will consider whether there are 'downstream' users able to establish a right to continued secondary use, and whether there are institutional or technical barriers to transferring that water. From the broader (e.g., CALFED) perspective, the significant considerations are circumstances in which reallocations constitute unacceptable redirected impacts (i.e., addressing external effects of transfers).⁴

Options:

Water use efficiency assumptions and analyses:

1. For Phase II and Program implementation phases, CALFED should develop more complete information on water reuse in the agricultural sector. Limitations of information available for the Phase II document should be disclosed. In the absence of complete information, CALFED should represent the potential benefit of agricultural water use efficiency (currently estimated at 160,000 af) as a minimum.
2. CALFED could engage outside expert(s) to examine the assumptions regarding water use efficiency measures in both the urban and agricultural sectors from a legal, institutional and technical perspective.

Transferable water:

3. The CALFED documents should delete any text suggesting that the Program assumes that recoverable water cannot be reallocated. It would be appropriate to discuss differing views regarding this issue in the context CEQA/NEPA responses to comments and disclosure of issues.

Endnotes:

1. See, for example, Water Use Efficiency Component Technical Appendix Table 1.2, page 1.7.
2. In current computations for determining consumptive use, the crop evapotranspiration is considered a fixed value regardless of irrigation methodology. The relationship between evaporation and transpiration could be segregated; reductions in evaporation (associated with irrigation methods which "save" water) could produce additional, transferable supplies.
3. For example, there are cases finding that subsequent users' rights to reuse imported water are more limited, in that the importer of water retains more rights in subsequent uses for that water. See *City of Los Angeles v. City of San Fernando*, et al, 14 Cal. 3d 199 (1975) and SWRCB Decision 1638 (1997).
4. In modifying the assumptions, CALFED could also emphasize that direct and indirect (including socio-economic/ third party) impacts of transfers must be identified and addressed through appropriate mitigation or other compensation.

Work within the economic analysis team can establish scenarios which include water transfers for impact scenarios. The economic analysis should link to related environmental and socio-economic impacts and should shed light on potential transfers impacts; iteratively, impact analysis should help define bounding conditions for transfers.